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ABSTRACT

Generated as the result of the deliberations of the COM Catalog Advisory Work Group, which depended heavily on a review of the available literature, individual analysis, and group discussion, this report is intended as a general planning document for Virginia Commonwealth university libraries concerning their possible implementation of a COM (computer output microform) catalog. Attention is given to the advantages and disadvantages of a COM catalog, building a library data base, strategies for conversion, closing the card catalog, COM catalog format and frequency of update, film type and format, and problem areas. Special importance is placed on listing the following types of requirements for a COM catalog: general, bibliographic records, film format, and microform readers. In addition, recommendations for dealing with potential problem areas are presented, as well as a general implementation schedule. Included are appendices on retrospective conversion (SOLINET), bibliographic record formats, library location designations, estimated card catalog maintenance costs, a framework for cost-benefit analysis, design for a catalog use study, statistical projections, film format (roll film vs. fiche), and measures of COM catalog effectiveness. A selective bibliography on COM catalogs is also provided. (Author/JD)

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Computer Output Microform (COM)
Catalog Requirements for the
Virginia Commonwealth
University Libraries

Prepared by

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March 1979

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Preface

The charge to the COM Catalog Advisory Work Group was to document the requirements for implementing a COM catalog at Virginia Commonwealth University Libraries. In addition, any potential problems associated with the conversion to a COM catalog were to be analyzed and possible solutions recommended.

The following report is intended to serve as a planning document. The Work Group endeavored to be as comprehensive as possible in its study. Due to time and work constraints certain areas could not be fully investigated. In many cases, questions or issues are raised but not answered. This in itself is valuable in terms of introducing areas for further discussion and analysis. As much technical information as was possible or feasible was discussed and included in the report. Some of the technical requirements listed may have to be adjusted in light of vendor capabilities.

It is hoped that this presentation will meet the immediate needs of the University Libraries and will encourage further discussion and analysis regarding benefit and cost implications of introducing a COM catalog.

Contents

- I. Introduction
- II. Role of the COM Catalog
- III. Nature of the Problem
- IV. COM Catalog Objectives
- V. Advantages and Disadvantages of a COM Catalog
- VI. Library Data Base
- VII. Conversion Strategies
- VIII. Closing the Card Catalog
- IX. COM Catalog: Base Catalog and Cumulating Supplement
 - Frequency of Update
 - Film Format
 - Film Type
- X. Problem Areas
- XI. University Libraries COM Catalog Requirements
- XII. Recommendations
- XIII. Implementation Plan
- XIV. Appendices:
 - A- Retrospective Conversion (SOLINET)
 - B- Bibliographic Record Formats
 - C- Library Location Designations
 - D- Estimated Card Catalog Maintenance Costs
 - E- Framework for Cost-Benefit Analysis
 - F- Design of Catalog Use Study
 - G- Statistical Projections
 - H- Film Format: Roll Film vs. Fiche
 - I- Measures of COM Catalog Effectiveness
- XV. Selective Bibliography

I. Introduction

The purpose of this report is to present the requirements of the University Libraries concerning the possible implementation of a COM catalog. The methodology followed included a review of the literature, individual analysis, group discussion, and consensus on some but not all major points. The COM Catalog Advisory Work Group has conscientiously fulfilled the charge of discussing and recommending requirements for implementing a COM catalog that will meet the needs of the University Libraries.

II. Role of the COM Catalog

The COM Catalog Advisory Work Group reached a firm consensus that a worthwhile and desirable objective should be the conversion of the existing card catalog to an on-line catalog. As to the proposed COM catalog, the group could not reach unanimity in its discussions as to the proper role of a COM catalog. Three distinct views emerged from the group's discussions concerning the utility of a COM catalog. First, the question was seriously raised whether a COM catalog is not an unnecessary and costly step in converting to an on-line catalog. Some libraries are bypassing the COM phase and are proceeding directly into an on-line catalog mode. Second, a COM catalog was seen as an interim step toward the final goal of an on-line catalog (within the next five years). Third, a COM catalog was viewed as not only an interim step, but also as a backup and complement to an eventual on-line catalog.

III. Nature of the Problem

The interest in Computer Output Microform (COM) catalogs can be attributed to some of the following factors:

1. space problems caused by the growth of the card catalog

2. costs associated with card catalog maintenance
3. existing card catalogs lack portability and distributed access
4. difficulty in creating a union or special listings of holdings from a card catalog
5. imminent arrival of AACR 2 and the inevitable result of higher catalog maintenance costs due to changes in cataloging practices

IV. COM Catalog Objectives for the University Libraries

The objectives for a COM catalog should include the following:

1. to increase and improve bibliographic access to the holdings of the University Libraries
2. to increase user and staff satisfaction with library services
3. to provide bibliographic access to remote users
4. to provide a union listing of the holdings of the University Libraries
5. to facilitate the editing and maintenance of a library data base (i.e., total library holdings of the University Libraries)

V. Advantages and Disadvantages of COM Catalogs

Advantages.

1. A COM catalog can provide distributed access (i.e., multiple copies of the catalog) and portability (i.e., multiple locations) of the catalog throughout the library or University.
2. Ease of maintenance in changing bibliographic information (e.g., deleting records for withdrawals due to weeding or non-replacement of missing items) is available.
3. Enhanced browsing is available since multiple entries per COM catalog page allow faster scanning of records.

4. Space requirements are reduced and the need to shift cards from card catalog drawers is eliminated.
5. Security of the cataloging records is enhanced since a master or backup copy is available for generating a replacement copy.
6. Flexibility of the records is increased and it is possible to generate additional special purpose listings (e.g., academic subject lists of holdings).
7. It will assist in reducing card catalog maintenance costs, although there is a good possibility that there might be concomitant cost increases in other library service areas.
8. It is feasible to produce a union listing of holdings between libraries and include previously excluded collections (e.g., holdings of the University Curriculum Laboratory, Learning Resource Centers, etc.).
9. It provides for the elimination of deteriorating cards.
10. It presents the opportunity to maintain and edit an in-house library data base.
11. It would create the opportunity to more fully participate in a cooperative acquisitions program among libraries in a geographic area.
12. It presents the opportunity to increase exposure of library users to library orientation and instruction.
13. Increased access to the catalog records by mobility-impaired individuals, unable to use the traditional card catalog, is made possible.

Disadvantages.

1. Necessity for multiple look-up¹ in searching records, will increase the amount of time required to retrieve requested records.
2. Redistribution and increase in the workload of other library departments (e.g., Reference, Collection Development, Order) is a very distinct and probable outcome.
3. Initially, authority control may be of a somewhat lower quality and there will be no holdings information.
4. There is the possibility of an increase in overall library operating expenses.
5. There is the problem of file integrity and this is especially true in the case of microfiche (i.e., refiling of fiche).
6. There is the problem of microform reader reliability and maintenance.
7. There may be a certain degree of eye fatigue for those users (staff and patrons) who utilize the catalog for prolonged time periods.
8. Potential loss in information retrieval due to user behavior which can be characterized by least effort (i.e., users seem to resist looking in more than one place). This could be a serious problem since there will be multiple places to look when a COM catalog is introduced.

¹ Requirement of multiple look-up caused by the existence of three separate catalogs: COM base; cumulating supplement; and old card catalog.

VI. Library Data Base

A conversion to either a COM or on-line catalog will give a certain impetus to the editing of our existing machine readable records and the creation of additional records to produce an expanded library data base. The concept of an integrated library data base representing the holdings² of the University Libraries is important. The data base should be maintained in a full MARC record format. If this is not possible then as complete a record as practical should be entered and maintained.³ The library data base should be the master bibliographic record repository and should serve as the source of bibliographic data for library applications requiring machine readable records.⁴ The library data base should serve as the source of input to other library applications requiring machine readable bibliographic records (i.e., COM catalog, information and circulation system, acquisitions system).

A master data base would allow information to be used in a variety of applications and specialized formats depending on what is required. Without a library data base, data redundancy and duplication of data input efforts for special applications could drive the cost of data creation and maintenance to an unacceptably high level. The SOLINET archive tapes and a retrospective conversion of library holdings will provide the input mechanisms for creating an

² Holdings in all formats should be included in the data base (i.e., monographs, continuations, periodicals, government documents, scores, media, etc.)³

In the case of serials, the cataloging records created under the Serials Check-in module of OCLC have not been edited and the serial records will need to be reviewed at a later date for completeness and accuracy of bibliographic content.

⁴ See Appendix G for statistical projections of University Libraries holdings and acquisitions.

expanded library data base.

We can no longer afford to think in terms of independent automated library applications. The interrelationship between library applications and their possible common and overlapping data requirements will become increasingly important as we depend more heavily on automation to solve library problems and extend services.

VII. Holdings Conversion Strategies

Conversion from human to machine readable records is a costly and time consuming activity. Costly as it will be, the retrospective conversion of the University Libraries collections should be undertaken.⁵ The objective of gradually incorporating existing manual records into a master library data base should be undertaken for several reasons:

- (1) The utility of a library data base would be greatly enhanced and expanded.
- (2) A COM catalog would be less confusing to use if the total holdings of the University Libraries were included in one integrated catalog. An integrated catalog would reduce the number of places to search and there would be less staff and user confusion if a dual operation (i.e., COM catalog and old card catalog) was not maintained.

Given an objective of gradual conversion of all bibliographic records into machine readable form, the following strategies for data entry should be considered.

First, current acquisitions could be entered on a regular basis utilizing

⁵ SOLINET recommends microfilming the card catalog, prior to achieving full retrospective conversion, to ensure file preservation and security: see Randall Cravey, et. al. Computer Output Microfilm (COM): An Alternative to Card Catalogs for SOLINET Members (1977), p. 24.

the OCLC archive tapes.

Second, items processed from July 1, 1975 to the present could be entered on a one-time basis utilizing the OCLC archive tapes.

Third, retrospective conversion of records⁶ processed prior to July 1, 1975, could be accomplished using one or a combination of the following methods: extraction from an exterior resource data base⁷ or an in-house creation of complete records.

An in-house creation of bibliographic records is not practical and it would be too costly in terms of staffing time. A practical alternative is to use an exterior resource data base to acquire, create, or modify machine readable records. OCLC/SOLINET and several commercial vendors offer the best opportunity for gaining access to a resource data base.⁸ The type of holdings contained in a potentially useful resource data base should be analyzed in terms of the University Libraries holdings profile to ensure a good bibliographic match-up.⁹

To match records in the University Libraries holdings to a resource data base, a unique identifier would be required as a search key (e.g., ISBN, OCLC number, LC card number, bibliographic search key). A productive keying strategy to access a commercially available exterior resource data base, would be to use a combination approach: key-in minimal bibliographic information (e.g., author, title, date, call number) and a unique identifier (e.g., ISBN,

⁶ An inventory would be highly desirable in order to avoid the creation of records for missing items.

⁷ There is the possibility of SOLINET assistance in a retrospective conversion project (see Appendix A).

⁸ For an excellent discussion on the strategies to develop collection data bases see the following: Brett Butler, Brian Aveny, and William Scholz, "The Conversion of Manual Catalogs to Collection Data Bases," Library Technology Reports, 14(2):109-207 (March-April 1978).

⁹ This is especially important in terms of the health sciences holdings at the Tompkins-McCaw Library.

OCLC number, LC card number). The matched records would have their minimal information replaced with a full bibliographic description and those not matched would remain in the same minimal but usable form. The minimal but usable records should be identified and upgraded to a full MARC format at a later date.

It should be kept in mind, that the creation of a record is a one-time cost while the utilization, maintenance, and updating of the in-house library data base will require provision for continual access and will result in on-going costs.

The data base match process consists of constructing the search code, keying of the records and editing. Once a listing of matched records is produced, it will be necessary to manually compare the selected records to the shelflist to make sure the matches are correct.

In addition, the changes to catalog entries that are now done manually will have to be done on-line and this will probably necessitate the acquisition of an additional OCLC terminal.

VIII. Closing the Card Catalog

With the advent of the proposed COM catalog, plans should be made to close the card catalog. It would be desirable to have a definite transition stage during which a COM catalog would be operational and cards would continue to be received and filed. During this transition stage an evaluation could be conducted as to user and staff reactions to the COM catalog. Based on this evaluation, appropriate changes could be made to the COM catalog.

On a definite and agreed upon date the card catalog should be closed.

The most practical strategy is to close the catalog by cataloging date. Closing by imprint date would necessitate the receiving and filing of cards for retrospective purchases.¹⁰

The old catalog should be frozen (i.e., no new catalog cards added) and full card sets¹¹ should be withdrawn and discarded whenever there is an added copy, added volume, new edition, withdrawal, transfer, etc. The card catalog would be maintained as to its accuracy, but all changes and additions would be reflected only in the COM catalog. After a full retrospective conversion, the card catalog would not be maintained as to correctness. In addition, there will probably be a need initially to continue filing into the shelflists and also filing and pulling on-order slips by the Order Department in the title section of the old card catalog.¹²

IX. COM Catalog: Base Catalog and Cumulating Supplement, Frequency of Update, Film Format, and Film Type

The COM catalog should be comprised of a base catalog and a cumulating supplement. The base catalog should be updated every six months and optimally the cumulating supplement should be updated every two weeks.¹³ At the end of

¹⁰ The number of cards to be filed would be dependent on the level of library materials expenditures for retrospective items.

¹¹ Excluding the shelflist card where applicable until the question of holdings can be resolved.

¹² See Section X. Problem Areas: On-Order File and Manual Shelflist.

¹³ A monthly update of the cumulating supplement is acceptable but less than monthly is not desirable.

six months, the cumulating supplement should be merged with and replace the original COM base catalog.

The Work Group recommends the use of both microfilm and microfiche formats for the COM catalog.¹⁴ Captive 16 mm roll film housed in a motorized reader should be utilized in high use service areas for the COM base catalog and COM cumulating supplement. Microfiche (i.e., flat film) should be utilized for the COM base catalog and the COM cumulating supplement in low use service areas.

The Work Group has indicated a preference for currentness (i.e., up-to-dateness) over film format (i.e., fiche vs. roll film) for the COM cumulating supplement, in high use service areas, if cost becomes a critical factor.

The COM master film copy (i.e., camera copy) should be of a positive image on dry silver film. The COM duplicates (i.e., working copies produced from a COM master) should be of a negative image (i.e., light characters against a dark background)¹⁵ on vesicular film.¹⁶

X. Problem Areas

The following areas pose special problems and deserve further consideration and analysis as to their solution.

1. On-Order File

The maintenance of an on-order file is an important public service requirement. Serious consideration must be given to the

¹⁴ See Appendix H for a summary of the advantages and disadvantages associated with each format.

¹⁵ Film duplicates (working copies) with a negative image would be more desirable since a negative image helps to reduce glare and eye fatigue and presents a more pleasing image (i.e., scratches and dust are less noticeable).

¹⁶ Vesicular is a polarity reversing film which will produce positive prints from a negative copy when using a reader-printer.

continuance of filing on-order slips in the title section of the card catalog. If this cannot be done, perhaps a separate on-order catalog could be created or another viable alternative investigated.¹⁷

2. Manual Shelflist

Initially it will be necessary to maintain the manual shelflist and continue to file shelflist cards. Holdings information is not available on the OCLC archive tapes and thus the COM catalog entries will not have holdings data. An orderly method and set of procedures will have to be developed in order to enter holdings information. This should be done as soon as it is feasible and practical.

3. Location Indication by Material Type

It would be desirable to include very specific location information concerning special holdings in each library (e.g., Reserve, Reference, Special Collections, etc.). Please consult Appendix C for a listing of potential library locator designations. This will present a problem since some but not all location designations are currently on the OCLC archive tapes. A method and set of procedures must be designed to input this valuable information into machine readable form, so that the COM catalog will be of full utility as a finding tool. In addition, a procedure must be designed to take into account changes as to location status of library materials (e.g., reserve materials).

¹⁷ Even with a complete retrospective conversion and until an on-line capability is implemented, there will be a need for on-order information.

4. Authority Control and AACR 2

Automated authority control is important for several reasons:

- (1) verification of headings on all current cataloging to reduce error in the catalog
- (2) provision of see and see also references for subject and name headings
- (3) conversion of obsolete headings to more current terminology on all retrospective cataloging
- (4) maintaining the authority files over time, making changes as terminology and structure are made more current.

The latter capability provides an important advantage over the traditional card catalog: one change to a heading in the authority file automatically changes all like headings in the catalog. This capacity for computer verification during update and maintenance procedures is a major benefit of an automated alternative (e.g., COM Catalog) to the traditional card catalog. Automated authority control replaces the necessary manual updating of catalog access points. Author, subject, and series fields can be automatically verified. At the present time, Virginia Commonwealth University Libraries have need for verification in all three of these areas.

Our particular situation, however, is complicated further by discrepancies that exist between the two libraries: James Branch Cabell Library and Tompkins-McCaw Library. Presently, corporate bodies and series decisions are made independently in cataloging practices for each library. In addition, the Cabell Library uses Library of Congress Subject Headings (LCSH) while the Tompkins-McCaw Library employs the National Library of Medicine Medical Subject Headings (MeSH). Differences in subject headings may make

it desirable to have separate subject catalogs for each library. Discrepancies in author and series authority could feasibly be remedied by forming one central authority file or by including additional cross references.

Regardless of which approach is used in settling discrepancies between the two libraries, procedures for automated authority control should be investigated. Authority files are available from several sources including the Library of Congress. The eighth edition of LC Subject Headings has not yet been released in machine-readable form. However, Mr. Paul Winkler announced at the 54th Meeting of the Potomac Technical Processing Librarians that LC plans to begin adding gradually, the AACR 2 automated name authority records to the LC automated tapes in the Fall of 1979. These tapes will be made available to other libraries. Other authority file sources include: independently compiled authority file sources; frequency of occurrence lists compiled from a library's data base; and keying-in manually all acceptable forms of authority and cross references for the individual library.

The authority file is considered an independent data base apart from the catalog data base and it will require independent maintenance procedures.

XI. University Libraries COM Catalog Requirements

General Requirements:

1. The vendor is required to accept the SOLINET/OCLC archive tapes as the input medium for creating and maintaining a University Libraries data base.

2. The vendor is required to accept the SOLINET/OCLC archive tapes and edit them as to duplicate records and process the tapes into an acceptable format that can be used to generate a library data base and a COM catalog.¹⁸
3. The vendor will create and maintain the University Libraries bibliographic data base in a full MARC record format as found in the OCLC archive tapes.
4. The University Libraries will retain control and ownership of its OCLC archive tapes, the maintained MARC data base and the products created from the MARC data base (e.g., COM master, COM duplicates, circulation records, etc.).
5. The COM catalog should consist of a base or primary catalog and a cumulating supplement.
6. The base catalog should be updated every six months and the cumulating supplement every two weeks. After six months the cumulating supplement should be merged with and replace the original base catalog.
7. Provision is required for the University Libraries to receive a current copy of its MARC data base on a regular and periodic basis (i.e., every six months).
8. Provision is required for the University Libraries to receive a current copy of its COM master film on a regular and periodic basis (i.e., every six months).

¹⁸ See Randall Cravey, et. al. Computer Output Microfilm (COM): An Alternative to Card Catalogs for Solinet Members (1977), pp. 25-26, for OCLC-MARC tape characteristics and considerations.

Bibliographic Record Field Requirements of a COM Catalog:

1. Combination-entry COM catalog with full bibliographic record (FBR) for the shelflist and title entries and a short record for author and subject entries (see Appendix B for bibliographic record formats and MARC fields for monographs and serials).
2. Dictionary author/title catalog and divided subject catalog.
3. Shelflist entry should indicate holdings information.
4. Separate shelflists for JBCL and TML.
5. Separate subject catalog for TML based on Medical Subject Headings (MeSH) and Library of Congress Subject Headings (LCSH/8).
6. Separate subject catalog for JBCL based on Library of Congress Subject Headings (LCSH/8) with some entries for TML (i.e., TML entries with assigned LCSH).
7. Union catalog listing (i.e., include both JBCL and TML) required for author and title entries.
8. Personal and corporate name subject entries should appear in both the author/title and subject sections of the COM catalog.
9. All entries should have specific locator information as to interlibrary and intralibrary location.
10. Where duplicate records exist between libraries, they should have individual and separate entries.
11. Duplicates within a holding library should display multiple location codes if required.
12. A visual indicator should precede the call number and location fields to facilitate finding within the bibliographic entry.
13. Entries should have a series statement field where applicable.

14. Bibliographic records must conform to the MARC and AACR 2 formats and meet the American National Standard for Bibliographic Information Interchange on Magnetic Tape, Z39.2-1971.
15. Sorting sequence of bibliographic entries should conform to ALA/LC prescribed filing order and rules.
16. Provision for automated name and subject authority control.
17. Provision for automated name authority control that will be compatible with the planned Library of Congress AACR 2 automated name authority tapes.
18. Provision for automated subject authority control for both Library of Congress Subject Headings, 8th Edition (LCSH/8) and Medical Subject Headings (MeSH).

COM Film Format Requirements: 19

1. COM film image: roll film should be cine mode orientation and microfiche should be zig-zag in format.
2. COM master and duplicates: positive image COM master on dry silver film and negative image COM second generation duplicates on vesicular film.
3. COM second generation duplicates are required to produce positive prints utilizing a reader-printer.
4. Extended COM character set which includes both upper, lower, and standard library characters is required.
5. COM type face should be of the sans serif variety.
6. Film reduction ratio of 42X is desired.
7. Film size: roll film should be 16 mm and microfiche should be 105 mm by 148 mm (approximately 4 by 6 inches).

¹⁹For an excellent review of film format questions see the following: William Saffady, Computer-Output Microfilm: Its Library Applications. Chicago: American Library Association, 1978, pp.46-109.

8. Capability to vary the size of the characters within a microimage should be available as an option.
9. Microfiche should have clear and transparent color coded headings to distinguish between the author/title and subject sections of the COM catalog.
10. Directional arrows should be employed to guide the reader as far as the direction or informational flow on the microfiche grid.

COM Reader/Hardware Requirements: ²⁰

General.

1. Rear projection display method or contain a filter to shield screen from adverse effect of ambient light or possess a hood to minimize ambient light.
2. Image quality characterized by high resolution, high contrast, and low distortion.
3. Reader case material consisting of steel, aluminum, or high-impact plastic.
4. Unbreakable or shatterproof screen.
5. Operational on standard 110-120 volts AC, 60 cycles outlet.
6. Temperature of the reader gate should not exceed 150° fahrenheit.
7. Temperatures for the following types of reader cases should not exceed these limits: metal (50° centigrade or 142° fahrenheit) and plastic (60° centigrade or 152° fahrenheit).
8. Film transport should minimize film scratching.
9. Full-size COM reader screen measuring approximately 11" X 14" is desirable.
10. Ability to establish and maintain proper focus from frame to frame.

²⁰For an excellent review of COM reader requirements see the following: William Saffady, Computer-Output Microform: Its Library Applications, Chicago: American Library Association, 1978, pp.110-132.

11. Operating instructions should be permanently inscribed on the case of the reader.

Microfilm Readers.

12. Should be a reel type which is captive (i.e., pre-loaded and self-contained), motorized, displays a visible index guide system, and is secure from patron tampering.
13. Reader noise levels should not exceed 60 decibels above the threshold of hearing.

Microfiche Readers.

14. Multiple magnification lens system utilizing a captive lens approach is desirable.
15. Large carrier is desirable in order to accommodate more than one fiche at the same time.

Reader-Printer.

16. Reader-printers should utilize the dry silver process.

Maintenance.

17. Lamps and other replacement parts must be readily available.
18. Maintenance service on microform machines should be available seven days a week.

Environment.

19. Placement of microform readers in areas with strong overhead lighting and in positions facing windows should be avoided.

Recommendations

(1) Pilot COM Catalog Project.

It is strongly recommended that a pilot COM catalog project be implemented to allow for an effectiveness evaluation. Both microfilm and microfiche should be available for actual application to allow a realistic appraisal of both formats as to advantages and disadvantages.

(2) Cost-Benefit and Catalog Use Studies.

A cost-benefit analysis and catalog use study should be conducted before a final commitment is made to the full implementation of a COM catalog. These studies should be conducted during the COM catalog pilot project. Program or overall planning cannot be separated from financial planning. A comprehensive and thorough cost analysis needs to be conducted (i.e., 5 year projection) to allow for adequate financial planning. A detailed cost analysis would generate information as to overall costs and expenditures associated with a conversion to a COM catalog (see Appendix D for estimated card catalog maintenance costs and Appendix E for a framework for a cost-benefit analysis). A catalog use study is required to determine the number of microform readers to adequately meet the service needs of the University Libraries (see Appendix F for a proposed design for a catalog use study). The results of this study should be used in conjunction with a recently published formula for reader allocation.²¹

(3) Program Evaluation.

It is strongly urged that a thorough and objective evaluation as to the effectiveness of the COM catalog be undertaken to determine how well the COM catalog meets the needs of users and library staff. This evaluation

²¹ See Appendix F for the "activity index" formula for microform reader allocation.

should be conducted during the pilot COM catalog project. Explicit and measurable evaluation criteria (i.e., measures of effectiveness) should be developed in order to conduct a valid program assessment (see Appendix I for proposed evaluation design).

(4) Orientation Program Planning.

There will be a critical need to adequately prepare library staff and users as to the replacement of the card catalog with a COM catalog. Library instruction and orientation presentations, brochures, newsletters, signage, and other modes of communication²² should be designed and implemented to inform library staff and users about the COM catalog.

(5) Evaluation and/or Implementation Work Group(s).

To assist in the generation and collection of appropriate evaluation and implementation information, one or two work groups should be created. It would be advantageous to involve a number of library staff members in the evaluation and implementation process. In addition, a variety of individual perspectives would be beneficial in gathering appropriate technical and operational information.

(6) Implementation Plan.

If at all possible, the full COM catalog should be phased-in during the summer months to allow the library staff to become familiar with the new catalog. In addition, any problems encountered would be less critical due to lower summer enrollments and an interim time period between the summer and fall sessions would allow any necessary corrective action to be taken. A detailed implementation plan (i.e., step-by-step

²² A general mail out to all University faculty and staff and articles in the VCU Times; VCU Today; and VCU Magazine would be beneficial.

approach) should be developed and finalized prior to the introduction of the full COM catalog. The library departments should be actively consulted as to implementation plans. A work group would be an effective mechanism for gathering and communicating information necessary for a smooth transition from a card to a COM catalog.

(7) Sample Copy of COM Catalog.

A sample of the initial COM catalog should be made available for inspection prior to full production. This would enable the University Libraries to evaluate the vendor's product and make any critical and necessary adjustments prior to actual implementation of a full COM catalog.

XIII. Implementation Schedule (General)

Step	Performed By	Task	Time Period
1.	Work Group	Define Requirements for a COM catalog	August 1978- February 1979
2.	Work Group	Submit Report on COM catalog to Library Administration	March 1979
3.	Library Administration	Evaluation of Report and Proposed Requirements	March-April 1979
4.	CPD and Library Departments	Pilot Project	July 1979- June 1980
5.	Library Planning CPD, and Reference Departments	Cost and Catalog Use Studies	July 1979- December 1979
6.	Library Administration, Library Planning, CPD, Evaluation Work Group	Evaluation of Pilot Project	September 1979- January 1980
27 ⁷ .	Library Administration, Library Planning, CPD, Implementation Work Group	Detailed Implementation Plan	January 1980- April 1980
8.	Library Administration and Library Planning	Proposal Submitted to MASD	April 1980

Step	Performed By	Task	Time Period
9.	CPD, Library Departments, and Implementation Work Group	Introduction of Full COM catalog	July 1980
10.	Library Administration, Library Planning, CPD, and Evaluation Work Group	Evaluation of COM Catalog	July 1980- November 1980
11.	CPD	Closing the Card Catalog	January 1, 1981
12.	CPD and Library Departments	On-going monitoring and modifications to the COM catalog	January 1981-

XIV. Appendices

Appendix A
SOLINET Retrospective Conversion Assistance

SOLINET LONG RANGE PLAN 1978



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SHORT RANGE PERIODTITLE: Retrospective Conversion Assistance

DESCRIPTION: Following the completion of the SOLINET data base, assistance in the planning, coordination and operation of a retrospective conversion program can be made available to members wishing to convert their entire card catalog to machine-readable form. The SOLINET data base may contain as many as two million unique titles at that time, and when combined with the catalog production capability of the SOLINET Data Center, could provide a reasonable alternative to the total conversion of a local data base via OCLC. If sufficient interest is shown, a pool of clerical help may be made available, to reduce the cost and aggravation of hiring and training a fresh staff at each participating institution where retrospective conversion is considered and ordered.

TIME FRAME: October 1978 through March 1979 and continuing

ESTIMATED DEVELOPMENT/ACQUISITION COSTS:

	FY 1979	FY 1980	FY 1981
Personnel	\$12,500	\$10,000*	\$10,000*
Travel	1,000		

*Variable depending upon participation, if any. A minimum of .5 technical personnel is expected for the administration of this program. Based on the cost per title from the COMCAT report, participants should anticipate a minimum cost of 75¢ per title for conversion from cards to machine-readable form.

PROBABLE REVENUE SOURCE(S):

SOLINET Income \$13,500
(Recoverable from participating institutions, if any.)
Actual conversion costs to be borne by participating institutions.

Appendix B
Bibliographic Record Formats:
COM Catalog Production Considerations
and
COM Catalog Bibliographic Record Formats
for Monographs and Serials

I. COM Catalog Production Considerations

- Collection size
- Entries generated per title
- Publication frequency
- Tracing indicators
- Sorting and filing rules
- Print character set to be utilized
- Bibliographic content of each entry
- Maximum characters per line per entry
- Maximum characters per line per page (page width)
- Maximum number of lines per page
- Line spacing
- Treatment of special characters
- Heading and index requirement
- Reduction ratio
- Copy/volume information
- Location information
- Relevant OCLC card profile considerations
- Underscoring and underlining requirements
- Tagged data fields in the catalog data base with indicators only
- Inserted or generated special cross-references and local cataloging comments
- Catalogs generated (main entry, title, subject, dictionary, other)
- Use of cumulative supplements
- Method of representing new titles between each COM production operation

See Randall Cravey, et.al. Computer Output Microfilm (COM): An Alternative To Card Catalogs for Solinet Members (1977), p.34.

II. COM Catalog Bibliographic Record Formats
for
Monographs With Appropriate MARC Fields

COM Catalog Bibliographic Record Formats (Proposed)

I. Shelf List Entry.* Call Number (099, 090, 050)¹_____.

(double space)

AUTHOR (1xx)_____ Title (240 xx, 245 xx)_____
_____. Edition (250)_____
Imprint (260)_____ Collation (300)_____
_____. Series (4xx)_____
_____. Notes (5xx)_____
_____.
Subject Headings (6xx) and Added Entries (7xx, 8xx)_____

_____.

(double space)
** Location (049)²_____

_____.

LC Card No. (010)_____
OCLC No. _____

¹If record contains two or more of these fields, order of priority for vendor should be 099, then 090, then 050.

²For explanation of location line see Appendix C

MONOGRAPHS

II. Author Main Entry.

AUTHOR (1xx) _____
Title (240 xx, 245 xx) _____
_____ . Edition (250) _____
Date (260 - delimiter c) _____ Series (4xx, (except 490 1), 8xx) _____
(double space)
* Call Number (099, 090, 050)¹ _____
** Location (049)² _____

¹If record contains two or more of these fields, order of priority for vendor should be 099, then 090, then 050.

²For explanation of location line see Appendix C

MONOGRAPHS

III. Author Added Entry.

Author Added Entry (700, 710, 711, 400, 410, 411, 800, 810, 811) .

(double space)

AUTHOR (1xx) .
Title (240 xx, 245 xx) .
Edition (250) .
Date (260 - delimiter c) . Series (4xx (except 490 1), 8xx) .

(double space)

* Call Number (099, 090, 050)¹ .
** Location (049)² .

¹If record contains two or more of these fields, order of priority for vendor should be 099, then 090, then 050.

²For explanation of location line see Appendix C.

MONOGRAPHS

IV. Title Main Entry.

TITLE (245 xx)¹
_____. Author _____
Edition (250) _____. Imprint (260) _____
_____. Collation (300) _____
Series (4xx) _____
Notes (5xx) _____
Subject Headings (6xx) and Added Entries (7xx, 8xx) _____

(double space)

x Call Number (099, 090, 050)² _____
xx Location (049)³ _____

¹When there is a 245 field and no lxx field, 245 should be capitalized.

²If record contains two or more of these fields, order of priority for vendor should be 099, then 090, then 050.

³For explanation of location line see Appendix C.

MONOGRAPHS

V. Title Added Entry with Author Main Entry.

Title Added Entry (730, 740, 440, 840)_____.

(double space)

AUTHOR (1xx)_____.

Title (240 xx, 245 xx)_____.

Edition (250)_____ . Collation (300)_____.

Series (4xx)_____.

Notes (5xx)_____.

Subject Headings (6xx) and Added Entries (7xx, 8xx)_____.

_____.

(double space)

* Call Number (099, 090, 050)¹_____.

** Location (049)²_____.

¹If record contains two or more of these fields, order of priority for vendor should be 099, then 090, then 050.

²For explanation of location line see Appendix C.

MONOGRAPHS

VI. Title Added Entry with Title Main Entry.

Title Added Entry (730, 740, 440, 840)_____.

(double space)

TITLE (245 xx)¹_____

_____. Author_____.

Edition (250)_____ Imprint (260)_____

_____. Collation (300)_____.

Series (4xx)_____.

Notes (5xx)_____.

Subject Headings (6xx) and Added Entries (7xx, 8xx)_____

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¹When there is a 245 field and no lxx field, 245 should be capitalized.

²If record contains two or more of these fields, order of priority for vendor should be 099, then 090, then 050.

³For explanation of location line see Appendix C.

MONOGRAPHS

VII. Subject Entry.

SUBJECT HEADING (6xx) _____.

(double space)

AUTHOR (1xx) _____ . Title (240 xx, 245 xx) _____
Edition (250) _____
Date (260 - delimiter c) _____ . Series (4xx (except 490 1), 8xx) _____
Subject Headings (6xx) _____

(double space)

* Call Number (099, 090, 050)¹ _____
xx Location (049)² _____

¹If record contains two or more of these fields, order of priority for vendor should be 099, then 090, then 050.

²For explanation of location line see Appendix C.

III. COM Catalog Bibliographic Record Formats
for
Serials With Appropriate MARC Fields

SERIALS

COM Catalog Bibliographic Record Formats - Serials (Proposed)

I. Shelf List Entry

* Call Number (099, 090, 050)¹

(double space)

AUTHOR (lxx) . Title (240 xx, 245 xx^{1a}) . Dates of Publication (362 0) . Edition (250) .
Imprint (260) . Collation (300) .
Series (4xx)

Notes (362 1, 246 0x, 246 1x, 247 x0, 5xx, 780 0x, 785 0x, 222, 022)²
Subject Headings (6xx) and Added Entries (7xx, 246 x1, 246 x3, 247 1x, 400, 410, 411, 440, 8xx)²

(double space)

MM Location (049) 3

LC Card No. (010)

OCLC No. _____

1. If record contains two or more of these fields, order of priority for vendor should be 099, then 090, then 050.
2. Order of printing and print constants for notes and tracings generated from fields 246, 247, 362 1, 780, and 785 should correspond to the order of printing and print constants as indicated in OCLC Technical Bulletin no. 24, "Specifications for Printing Catalog Cards for Serials". (also for fields 022 and 222)
3. For explanation of location line see Appendix C.

- 1a. When there is a 245 field and no lxx field, 245 field should be capitalized.

SERIALS

II. Author Main Entry

AUTHOR

Title (245 xx) . Dates of publication (362 0)
Edition (250)
Series (4xx (except 490 1), 8xx
Notes relating to dates of publication (362 1) and notes relating to
preceding or subsequent publications (580, 780 0x, and 785 0x)¹

(double space)
* Call Number (099, 090, 050)²
** Location (049)³

1. Notes generated from fields 780 0x, 785 0x, should include print constants as indicated in OCLC Technical Bulletin no. 24, "Specifications for Printing Catalog Cards for Serials".
2. If record contains two or more of these fields, order of priority for vendor should be 099, then 090, then 050.
3. For explanation of location line see Appendix C.

SERIALS

III. Author Added Entry

Author Added Entry (700, 710, 711, 400, 410, 411, 800, 810, 811)

(double space)

AUTHOR (1xx)

Title (245 xx)^{1a} . Dates of Publication (362 0)

Edition (250)

Series (4xx (except 490 1), 8xx)

Notes relating to dates of publication (362 1) and notes relating to preceding or subsequent publications (580, 780 0x, and 785 0x)¹

(double space)

■ Call Number (099, 090, 050)²

■ Location (049)³

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1. Notes generated from fields 780 0x, 785 0x, should include print constants as indicated in OCLC Technical Bulletin no. 24, "Specifications for Printing Catalog Cards for Serials".
 2. If record contains two or more of these fields, order of priority for vendor should be 099, then 090, then 050.
 3. For explanation of location line see Appendix C.
- 1a. When there is a 245 field and no 1xx field, 245 should be capitalized.

IV. Title Main Entry.

TITLE (245 xx)¹ _____ Dates of Publication (362 0) _____
 Edition (250) _____
 Series (4xx (except 490 1), 8xx) _____
 Notes² (362 1, 246 0x, 246 1x, 247 x0, 5xx, 780 0, 785 0, 222, 022) _____
 Subject Headings (6xx) and Added Entries (7xx, 246 x1, 246 x3, 247 1x, 400, 410, 411, 440, 8xx)² _____
 (double space)
 * Call Number (099, 090, 050)³ _____
 ** Location (049)⁴ _____

-
1. When there is a 245 xx field and no lxx field, 245 should be capitalized.
 2. Order of printing and print constants for notes and tracings generated from fields 022, 222, 246 xx, 247 xx, 362 1, 780 and 785 should correspond to the order of printing and print constants as indicated in OCLC Technical Bulletin no. 24, "Specifications for Printing Catalog Cards for Serials".
 3. If record contains two or more of these fields, order of priority for vendor should be 099, then 090, then 050.
 4. For explanation of location line see Appendix C.

SERIALS

V. Title Added Entry with Author Main Entry.

Title Added Entry (730, 740, 440, 840)

(double space)

AUTHOR (1xx)

Title (245 xx) . Dates of Publication (362 0)

. Edition (250) . Collation (300) .

Series (4xx)

Notes (362 1, 246 0x, 246 1x, 247 x0, 5xx, 780 0, 785 0, 222, 022)¹

Subject Headings (6xx) and Added Entries (7xx, 246 1x, 246 3x,
247 1x, 400, 410, 411, 440, 8xx)¹

(double space)

Call Number (099, 090, 050)²

MM Location (049)³ }

1. Order of printing and print constants for notes and tracings generated from fields 022, 222, 246 xx, 247 xx, 362 1, 780 and 785 should correspond to the order of printing and print constants as indicated in OCLC Technical Bulletin no. 24, "Specifications for Printing Catalog Cards for Serials".
2. If record contains two or more of these fields, order of priority for vendor should be 099, then 090, then 050.
3. For explanation of location line see Appendix C.

SERIALS

VI. Title Added Entry with Title Main Entry.

Title Added Entry (730, 740, 440, 840)
 (double space)
 TITLE : (245 xx) ¹ . Dates of publication (362 0)
 Edition (250) . Collation
 Series (4xx)
 Notes (362 1, 246 0x, 246 1x, 247 x0, 5xx, 780 0, 785 0, 222, 022) ²
 Subject Headings (6xx) and Added Entries (7xx, 246 1x, 246 3x,
 247 1x, 400, 410, 411, 440, 8xx) ²
 (double space)
 * Call Number (099, 090, 050) ³
 ** Location (049) ⁴

1. When there is a 245 field and no 1xx field, 245 should be capitalized.
2. Order of printing and print constants for notes and tracings generated from fields 022, 222, 246 xx, 247 xx, 362 1, 780, and 785 should correspond to the order of printing and print constants as indicated in OCLC Technical Bulletin no. 24, "Specifications for Printing Catalog Cards for Serials".
3. If record contains two or more of these fields, order of priority for vendor should be 099, then 090, then 050.
4. For explanation of location line see Appendix C.

VII. Subject Entry

SUBJECT HEADING (6xx) _____.

(double space)

 AUTHOR (1xx) _____ Title (245 xx)¹ _____
 Dates of Publication (362 0) _____ Edition (250) _____
 Series (4xx (except 490 1), 8xx) _____

 Notes relating to dates of publication (362 1) and notes relating
 to preceding or subsequent publications (580, 780 0x, and 785 0x)²
 Subject Headings (6xx) _____

(double space)

 M Call Number (099, 090, 050)³ _____
 MM Location (049)⁴ _____

-
1. When there is a 245 field and no 1xx field, 245 field should be capitalized.
 2. Notes generated from fields 780 0x and 785 0x should include print constants as indicated in OCLC Technical Bulletin no. 24, "Specifications for Printing Catalog Cards for Serials".
 3. If record contains two or more of these fields, order of priority for vendor should be 099, then 090, then 050.
 4. For explanation of location line see Appendix C.

Appendix C

**Library Materials Location Designations
and
Location Information With
Appropriate MARC Fields**

Library Materials Location

James Branch Cabell Library Designations

Reference
Closed Reference
Index Tables
Atlas Cases
Business Services
Government Documents
Reserve
Music Room
Microform Room
Serials
Special Collections
Curriculum Laboratory
Audio-Visual

Tompkins-McCaw Library Designations

Reference
Reference Office
VADICS Reading Room
Reserve
Vault Archives
Acquisitions Office
Serials Office
Journal Stacks
Copy 2 Room
Microfilm Area
Special Collections
Serials

Location Information With Appropriate MARC Fields

The following specifications indicate how locations and call numbers should appear on COM catalog entries.

VRCC - In Location line of COM entry Print: Academic Campus
In call no. line Print: 099,090 or 050 field (in that order of priority)
Example: PK2579.M4948A7

VRCD - Location line: Academic Campus
Call no. Line: Ref. [space] 099,090, or 050
Example: Ref. Z7111.A3

VRCE - Location line: Academic Campus
Call no. line: Spec. Coll. [space] 099,090, or 050
Example: Spec. Coll. E184.3.A3 1974

VRCF - Location line: Academic Campus
Call no. line: Music Room [space] 099,090, or 050
Example: Music Room M1002.M3 Nr. 106

VRCG - Location line: Academic Campus
Call no. line: 099,090, or 050 field.
Example: E184.D3 1978

VRCM - Location line: MCV Campus
Call no. line: 099,090, or 050
Example: RC245.L3 1967

VRCN - Location line: MCV Campus
Call no. line: Ref. [space] 099,090, or 050
Example: Ref. Z7111.D3 1978

VRCO - Location line: MCV Campus
Call no. line: Spec. Coll. [space] 099,090, or 050
Example: Spec. Coll. Z7111.4.A3 1978

VRCP - Location line: MCV Campus
Call no. line: 099
Example: SER.

Important: If in the 049 field "input stamps" exist within brackets before the 4 letter location symbol, these should print before the call number in the call no. line.

Example: 049 [Ref.] VRCg
090 Z282 #b .I65

Entry in COM catalog call no. line should appear: Ref. Z282.I65

Likewise, if in the 049 field "input stamps" exist in brackets after the 4 letter location symbol, these should print after the call number in the Call no. line.

Example: 049 VRCg [Latest] [ed.] [Ref.]
090 Z282 #b .I65

Entry in COM catalog call no. line should appear: Z282.I65 Latest ed. Ref.

Appendix D
Card Catalog Maintenance Cost Study

Cost of Card Catalog Maintenance

I. Background

A cost study of the Central Processing Division's maintenance of the card catalog was undertaken during October 1978. The study period covered the entire month of October. It was felt that October is a fairly representative time period and that it would provide a good sample from which to make an extrapolation and an annual estimate. The methodology used was a work diary format whereby each individual indicated what card catalog maintenance functions he/she was performing. Eleven functions were identified and utilized in calculating time spent on card catalog maintenance.

II. Card Catalog Maintenance Functions.

1. Alphabetizing work forms
2. Typing: catalog cards and guide cards
3. Filing catalog cards
4. Checking card filing
5. Checking subject headings against authority (i.e., LC; MeSH)
6. Correcting cards and guide cards against worksheets
7. Checking catalog cards against worksheets
8. Travel to Tompkins-McCaw Library (for catalog card maintenance)
9. Supervising and training personnel (catalog card maintenance)
10. Card catalog maintenance: shifting contents for expansion and then re-lettering drawers.
11. Pulling cards (for transfer to another campus or for discard)

II. Annual Estimated Cost of Card Catalog Maintenance (Summary).

Salaries	\$19,605.00
Fringe Benefits (12.8%)	2,509.44
Wages	9,172.00
Card Production ¹	10,725.00
Card Cabinets ²	6,900.00
Total	<u>\$48,911.44</u>

¹ Calculated on an estimate of 275,000 cards per annum at \$.039 per card.

² Calculated on an estimate of three card catalog cabinets (72 trays per cabinet) at \$2,300 per cabinet (cost includes discount and shipping). Please note that each 72-tray cabinet has a capacity of 93,000 medium weight catalog cards.

Table I.- Card Catalog Maintenance Functions, Costs, and Direct Labor Costs, and Percentage of Expense

Functions Associated With Card Catalog Maintenance	Direct Labor Cost (\$)	Percentage (%)
1. Alphabetizing work forms	\$ 242.95	.84
2. Typing: catalog cards and guide cards	1,448.83	5.03
3. Filing catalog cards	11,581.18	40.25
4. Checking card filing	6,994.41	24.31
5. Checking subject headings against authority (i.e., LC; MeSH)	473.54	1.64
6. Correcting cards and guide cards for card catalogs	2,298.94	7.99
7. Checking catalog cards against worksheets	3,107.95	10.80
8. Travel to Tompkins-McCaw Library (for card catalog maintenance)	929.24	3.23
9. Supervising and training personnel (card catalog maintenance)	157.55	.55
10. Card catalog maintenance: shifting contents for expansion and re-lettering drawers	941.08	3.27
11. Pulling cards (for transfer to another campus or for discard)	601.33	2.09
Total Functions	\$28,777.00	100.0 %

Appendix E

Framework for a Cost - Benefit Analysis

Framework for a Cost - Benefit
Analysis (5 year projection)

I. Benefits

- A. Portability - Remote Catalog Access
- B. Union Catalog
- C. Scanning
- D. Authority Control
- E. Reduce Card Catalog Maintenance
- F. Improved File Security
- G. Library Image and Prestige

II. Costs

- A. Hardware : Readers
- B. Programming
- C. Data Conversion
- D. Processing
- E. Film Production
- F. Reader Maintenance
- G. Card Catalog Maintenance : removal of cards
- H. Staff Training
- I. Multiple Look-up Requirements
- J. Planning

Appendix F
Catalog Use Sampling
and
Activity Index Formula
for Allocating Microform Readers

Catalog Use Sampling and Allocation of Microform Readers

I. Background

The purpose of recording the use of the card catalog is to determine the volume of utilization of different sections of the catalog (i.e., author, title subject). This will help determine the number of microform readers and possibly reader-printers that are required to adequately serve the patrons of the University Libraries vis-a-vis a COM catalog. The Office of Library Planning in cooperation with the Reference Departments of both Libraries should conduct this study for one week during a representative service month. A set of random observation times has been generated to help ensure that the results of the survey are representative of actual catalog use patterns.

II. Catalog Use Sampling : Observation Rules

1. Central Processing Division and Collection Development staff members should not be counted.
2. When Reference Department staff members are assisting a patron at the catalog, count only the patron.
3. Count only those patrons that are utilizing or consulting a card catalog tray at each sampled time period.

III. "Activity Index" Formula for Determining Allocation of Microform Readers¹

Activity Index Formula:

$$Y = 41.64 + 10.1A + 0.87B + 3.82C + 1.01D$$

Where: Y= Activity Index

A= Registration of patrons (in thousands)

B= Circulations per year (in thousands)

C= Number of square feet of floor space (in thousands)

D= Reference questions per year (in thousands)

Minimum Viewers:

Activity Index

Minimum Viewers

200 or less

2

201 - 400

4

401 - 600

6

601 - 800

8

801 or more

10

¹Brian Aveney and Mary Fischer Ghikas, "600 Users Meet the COM Catalog," American Libraries, 10(February 1979), 82-83.

Sampling of Catalog Use

[illegible]

Appendix G

Statistical Projections
for the University Libraries

Statistical Projections for the University Libraries

<u>Library Materials</u>	<u>1975-76 (Actual)</u>	<u>1976-77 (Actual)</u>	<u>1977-78 (Actual)</u>	<u>1978-79 (Projected)</u>	<u>1979-80 (Projected)</u>	<u>1980-81 (Projected)</u>	<u>1981-82 (Projected)</u>
1. Volumes Added	30,985	39,287	35,221	39,400	41,518	43,636	45,754
2. Volumes Held	393,567	432,854	468,075	507,475	548,993	592,629	638,383
3. Titles Added	28,185	29,428	29,419	30,245	30,862	31,479	32,096
4. MARC Records (OCLC archive tapes)	28,185	29,428	29,419	30,245	30,862	31,479	32,096
5. Holdings Added (all formats)	54,498	58,324	55,575	57,210	57,749	58,288	58,827
6. Holdings (all formats)	508,948	567,272	622,847	680,057	737,806	796,094	854,921

Appendix H

Film Format: Format Decision Factors
and Microfilm versus
Microfiche (Advantages
and Disadvantages)

1

Format Decision Factors

1. file size
2. frequency of updating
3. number of copies to be made
4. whether copies are for in-house or out-of-house distribution
5. frequency of file use
6. access speed requirements
7. preferred type of indexing
8. type of machinery presently owned
9. condition and size of original documents
10. user's needs

¹
Alice Harrison Bahr, Microforms: The Librarian's View, 1978-1979.
White Plains, N.Y.: Knowledge Industry Publications, Inc., 1978, pp. 23 and 25.

2
Microfilm and Microfiche
(Advantages and Disadvantages)

1. Microfilm (roll film)

A. Advantages:

1. provides excellent file integrity
2. provides a fast method for retrieval
3. minimizes film handling
4. practical method for storing medium size files

B. Disadvantages:

1. microfilm readers are expensive
2. not practical for distribution purposes
3. roll film is more expensive to produce

2. Microfiche (flat film)

A. Advantages

1. duplicates from flat film are more economical and easy to produce
2. fiche readers are less expensive than roll film readers

2
See the following for a discussion: Philip J. Schwarz, COM Decisions and Applications in a Small University Library. Wisconsin University-Stout, Menomonie (November 1976), ED 135 391, pp.11-15 and Alice Harrison Bahr, Microforms: The Librarian's View, 1978 - 1979, White Plains, N.Y.: Knowledge Industry Publications, Inc., 1978, pp.14-25.

3. fiche can be distributed easily
4. maintenance problems are generally fewer with fiche readers (i.e., fewer moving parts to malfunction).

B. Disadvantages

1. fiche file integrity is difficult to maintain in a public³ services application.
2. more susceptible to theft or misplacement than microfilm
3. automatic retrieval devices which enhance integrity are very expensive

³ Microfiche is more likely to be misfiled due to increased manual handling.

Appendix I
Evaluation of the COM Catalog

I. Evaluation Elements

- A. readers and peripheral equipment
- B. film format
- C. display of bibliographic entries
- D. bibliographic content of entries
- E. orientation and training

II. Evaluation Strategies

- A. error reports and suggestion forms
- B. interviews with users
- C. observation of use
- D. finding time experiment
- E. statistics on machine performance

¹Valentina De Bruin, "Sometimes Dirty Things are Seen on the Screen: a Mini-Evaluation of the COM Microcatalogue at the University of Toronto Library," The Journal of Academic Librarianship, 3 (November 1977), 260-261.

XV. Selective Bibliography
on COM Catalogs

Selective Bibliography on COM Catalogs

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